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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,893	08/02/2001	David Mark Pierce	5150-57700	9833

35690 7590 02/23/2006

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EXAMINER	
BATES, KEVIN T	
ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/920,893	PIERCE ET AL.	
	Examiner	Art Unit	
	Kevin Bates	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-16 and 24-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 5-16, and 24-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

This Application is in response to a communication made on December 8, 2005.

Claims 4 and 17-23 have been cancelled.

Claims 1-3, 6, 9-14, and 16 have been amended.

Claims 1-3, 5-16, and 24-31 are currently pending in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 24-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Kerrigan (5404488).

Regarding claim 24, Kerrigan teaches a method of processing measurement data, the method comprising:

(a) receiving first measurement data of a first data type of a plurality of data types from a first measurement device of a plurality of measurement devices (Column 1, lines 44 – 48, where the logger application is the real time engine which interfaces with the data feeds, which are measurement streams);

(b) storing the received measurement data in a shared memory location (Column 1, lines 49 – 52, where the data values are stored/cached into memory);

(c) appending one or more bits to a first header record wherein the header record comprises a series of bits, wherein each bit in the series of bits represents a section of the stored measurement data in the shared memory location (Column 6, lines 11 – 14; where the logger application stores into memory flags with the data feed values to determine whether there has been updates to the stored data values);

(d) retrieving at least a subset of the stored measurement data from the shared memory location substantially concurrently with the measurement data being stored in the shared memory location (Column 4, lines 24 – 34, where the processes running on the system are the real time engine and the applications and they are all running and performing concurrently);

repeating (a)-(d) for second and subsequent measurement data wherein a second header record is created when the first header record reaches a user specified number of bits and subsequent header records are created when the second header record reaches the user specified number of bits (Column 1, lines 56 – 68 where the streamed data feed is received and cached and sent to the applications if the data is found to be updated).

Regarding claim 25, Kerrigan teaches the method of claim 24, wherein measurement data is received for a user specified time interval (Column 26, lines 36 – 38).

Regarding claim 26, Kerrigan teaches the method of claim 24, wherein each bit in each header record is designated as "changed" for those sections of stored

measurement data which comprise any change in the measurement data from previously stored measurement data from a same measurement device;

wherein each bit in each header record is designated as "not changed" for those sections of stored measurement data which comprise no change in the measurement data from previously stored measurement data from a same measurement device (Column 6, lines 9 – 23).

Regarding claim 27, Kerrigan teaches the method of claim 24, wherein in retrieving at least a subset of the stored measurement data from the shared memory location substantially concurrently with the measurement data being stored in the shared memory location, measurement data associated with a single header record is retrieved (Column 4, lines 24 – 34, where the processes running on the system are the real time engine and the applications and they are all running and performing concurrently).

Regarding claim 28, Kerrigan teaches the method of claim 24, wherein in retrieving at least a subset of the stored measurement data from the shared memory location substantially concurrently with the measurement data being stored in the shared memory location, measurement data associated with one or more header records is retrieved (Column 4, lines 24 – 34, where the processes running on the system are the real time engine and the applications and they are all running and performing concurrently).

Regarding claim 29, Kerrigan teaches the method of claim 24, wherein the first measurement data comprises live data acquired from a data acquisition device (Figure 1, element 12).

Regarding claim 30, Kerrigan teaches the method of claim 24, wherein the first measurement data comprises one or more of: waveform data; single-point data, wherein single-point data comprises a data value and a data timestamp; alarm data; event data (Column 1, lines 15 – 24).

Regarding claim 31, Kerrigan teaches the method of claim 24, wherein the first measurement data comprises measurement data acquired from a measurement device (Column 4, lines 49 – 55).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 and 5-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerrigan (5404488) in view of Greenfield (6684207).

Regarding claim 1, Kerrigan teaches a method of logging and trending measurement data (Abstract), the method comprising:

a logger application executing on a first computer system receiving a measurement stream comprising a plurality of data values (Column 1, lines 44 – 48,

where the logger application is the real time engine which interfaces with the data feeds, which are measurement streams);

the logger application writing portions of the plurality of data values to respective shared memory sections of a memory (Column 1, lines 49 – 52, where the data values are stored/cached into memory) in the first computer system in a modular fashion (Figure 7, element 2016, where the system uses data structures to store the information obtained from the data feeds);

wherein each of the portions of the plurality of data values in each of the respective shared memory sections is independently accessible by a trender application (Column 1, lines 52 – 55, where the trender application is the application that is getting the feed updates by the real time engine)

. the trender application generating a query request for a first portion of the plurality of data values (Column 26, lines 32 – 38);

the first computer system sending a single message to the second computer system, wherein the single message comprises the first portion of the plurality of data values (Column 1, lines 62 – 67, where the logger checks which data values have changed and only sends the recently updated values together to the trending application);

the trender application receiving the single message comprising the first portion of the plurality of data values;

the trender application displaying the first portion of the plurality of data values (Column 5, lines 22 – 24).

Kerrigan does not explicitly indicate that the trender application is executing in a second computer system.

Greenfield discloses a system with a database application (Figure 1, element 105) that is located on a separate computer system as a trender application (Figure 1, element 101; Column 7, lines 56 – 65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Greenfield's teaching on Kerrigan's system to allow applications on remote systems to gain access to the real-time information measurement streams to perform remote analytical processing on the data in the database.

Regarding claim 2, Kerrigan teaches the method of claim 1, wherein each of the portions of the plurality of real time data values in each of the respective shared memory sections is independently accessible by a trender application executing in a second computer system using a single network message (Column 1, lines 62 – 67, where the logger checks which data values have changed and only sends the recently updated values together to the trending application).

Regarding claim 3, Kerrigan teaches the method of claim 1, wherein each of the portions of the plurality of real time data values in each of the respective shared memory sections independently and accurately represents a subset of the measurement stream (Column 1, lines 56 – 60).

Regarding claim 5, Kerrigan teaches the method of claim 4, wherein the single message is a delta page (Column 1, lines 63 – 67, where sending the delta page means

sending only the information to the application that has been changed since the last time the application has been updated).

Regarding claim 6, Kerrigan teaches the method of claim 4, wherein the logger application receives the measurement stream and writes the portions of the plurality of real time data values to respective shared memory sections of the memory at a first data rate;

wherein the trender application generates the query request for the first portion of the plurality of real time data values at a second data rate, wherein the second data rate is less than the first data rate (Column 5, line 66 – Column 6, line 3, where the first application runs at a higher priority rate thus having priority and higher speeds than the second rate).

Regarding claim 7, Kerrigan teaches the method of claim 6, wherein the first computer system sending a single message to the trender application comprises:

a first observer software program executing on the first computer system querying the memory for a most recent portion of data at the second data rate (Column 5, line 66 – Column 6, line 3, where the first application runs at a higher priority rate thus having priority and higher speeds than the second rate); and

the first observer software program sending the most recent portion of data to the trender application at the second data rate after said querying the memory (Column 1, lines 52 – 55);

wherein the trender application receiving the single message comprises:

a second observer software program with the trender application receiving the most recent portion of data at the second data rate from the first observer software program (Column 1, lines 63 – 67); and

the second observer software program writing the most recent portion of data to a memory location (Column 5, lines 22 – 24, where the application takes the data values and uses a spread sheet to store and analyze the data).

Kerrigan does not explicitly indicate that the trender application is executing in a second computer system.

Greenfield discloses a system with a database application (Figure 1, element 105) that is located on a separate computer system as a trender application (Figure 1, element 101; Column 7, lines 56 – 65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Greenfield's teaching on Kerrigan's system to allow applications on remote systems to gain access to the real-time information measurement streams to perform remote analytical processing on the data in the database.

Regarding claim 8, Kerrigan teaches the method of claim 7, wherein the memory location is a database (Column 6, lines 63 – 66).

Regarding claim 9, Kerrigan teaches the method of claim 1, wherein the trender application is operable to partially replicate the plurality of real time data values comprising the measurement stream (Column 5, lines 22 – 24, where the application takes the data values and uses a spread sheet to store and analyze the data).

Regarding claim 10, Kerrigan teaches the method of claim 1, wherein the logger application writing portions of the plurality of real time data values to respective shared memory sections of a memory in the first computer system in a modular fashion comprises: creating a header record comprising a series of bits, wherein the bits in the header record indicate a changed status of the respective shared memory sections; the logger application writing the header record in the shared memory (Column 6, lines 9 – 23).

Regarding claim 11, Kerrigan teaches a method of logging and trending real time measurement data, the method comprising:

a logger application executing on a first computer system writing a first plurality of real time data values (Column 1, lines 44 – 48, where the logger application is the real time engine which interfaces with the data feeds, which are measurement streams) to a first shared memory section in the first computer system during a first time period (Column 1, lines 49 – 52, where the data values are stored/cached into memory);

initiating a trender application;

the trender application executing generating a query request for the first plurality of real time data values and sending the query request to the first computer system (Column 26, lines 32 – 38);

the first computer system sending a single message to the second computer system, wherein the single message comprises the first plurality of data values (Column

1, lines 62 – 67, where the logger checks which data values have changed and only sends the recently updated values together to the trending application).

Kerrigan does not explicitly indicate that the trender application is executing in a second computer system.

Greenfield discloses a system with a database application (Figure 1, element 105) that is located on a separate computer system as a trender application (Figure 1, element 101; Column 7, lines 56 – 65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Greenfield's teaching on Kerrigan's system to allow applications on remote systems to gain access to the real-time information measurement streams to perform remote analytical processing on the data in the database.

Regarding claim 12, Kerrigan teaches the method of claim 11, further comprising: performing a single write operation in the second computer system to store the first plurality of real time data values in a memory of the second computer system (Column 5, lines 22 – 24, where the application takes the data values and uses a spread sheet to store and analyze the data).

Regarding claim 13, Kerrigan teaches the method of claim 12, wherein said performing a single write operation comprises:

updating a local cache in a memory of the second computer system with the first plurality of real time data values using a single write operation (Column 1, lines 63 – 66).

Regarding claim 14, Kerrigan teaches the method of claim 12, further comprising: the trender application reading the first plurality of real time data values from the memory of the second computer system after said performing a single write operation in the second computer system to store the first plurality of real time data values in a memory of the second computer system (Column 5, lines 22 – 24, where the application takes the data values and uses a spread sheet to store and analyze the data)..

Regarding claim 15, Kerrigan teaches the method of claim 12, wherein the first computer system sending a single message to the trender application comprises the first computer system sending a single network message to the trender application.

Kerrigan does not explicitly indicate that the trender application is executing in a second computer system.

Greenfield discloses a system with a database application (Figure 1, element 105) that is located on a separate computer system as a trender application (Figure 1, element 101; Column 7, lines 56 – 65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Greenfield's teaching on Kerrigan's system to allow applications on remote systems to gain access to the real-time information measurement streams to perform remote analytical processing on the data in the database.

Regarding claim 16, Kerrigan teaches the method of claim 12, further comprising: the logger application executing on the first computer system writing second

and subsequent pluralities of real time data values to second and subsequent shared memory sections in the first computer system during second and subsequent time periods; wherein the first, second and subsequent pluralities of data values affect only what is written to their respective first, second and subsequent shared memory sections (Column 1, line 67 – Column 2, line 9).

Response to Arguments

Applicant's arguments filed December 8, 2005 have been fully considered but they are not persuasive.

Regarding claim 24, the applicant argues that the reference, Kerrigan, does not teach the idea that the data is retrieved from the shared memory substantially concurrently with the data being stored in the shared memory location and also that the reference does not teach the idea of creating header records in the manner claimed. The examiner disagrees, as seen in Column 4, lines 35 – 48 of the reference Kerrigan, the measurement data is received through a feed server, which acts as the shared memory, where the external data is read in real time, thus as they are being calculated or measured, where the feed server just receives the real time data, translates it and makes it available to the RTE in real time, which would have to be concurrently or a pass-through data feed with the receiving of the raw data and making that information available, as it is received. Also as seen in Column 1, lines 56 – 67, the system in Kerrigan has the capabilities of identifying to have both the real time data and the data last sent to the application, so it inherently has some sort of identifier or "header" linked

with both sets of data in order for the system to tell which version it has and the ability to compare those values.

Regarding claim 1, the applicant argues that neither of the combined references, Kerrigan and Greenfield, indicates using real-time measurement data in their logging and trending systems. The examiner disagrees, as seen in Column 1, lines 46 - 48, the reference Kerrigan, discloses using real-time data feeds and a real-time engine that works as a trender for those real-time feeds.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Bates whose telephone number is (571) 272-3980. The examiner can normally be reached on 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KB

KB
February 15, 2006

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER